

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of: Kouchi)	Group Art Unit: 1631
)	
Application No.: 10/525,749)	Examiner: SKOWRONEK, K.
)	
Filed: February 25, 2005)	Confirmation No.: 2075
)	
Atty. File No.: 5553KOU1-1)	
)	

For: Biological Information Trend Display Device and Method Thereof

* * *

APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Appellants hereby Appeal to the Board of Appeals from the Notice of Appeal and Pre-Appeal Brief Request for Review filed 22 December 2009 and the Notice of Panel Decision dated 21 January 2010. A single copy of this Appeal Brief is being submitted in accordance with MPEP §1205.02.

(i) REAL PARTY IN INTEREST.

All right, title, and interest in this application has been assigned to Dainippon Pharmaceutical Co., Ltd., Osaka, Japan. The Assignment is recorded at Reel/Frame 017041/0489.

(ii) RELATED APPEALS AND INTERFERENCES.

There are no related appeals, interferences or judicial proceedings known to Appellant, or Appellants' legal representative, which may be related to, directly affect, be directly affected by, or have a bearing on the Board's decision in the this pending Appeal.

(iii) STATUS OF CLAIMS.

Claims 1-3, 5-15 and 17-20 are pending, with claim 4 having been cancelled in the 28 December 2007 Amendment and claims 16 and 21 cancelled in the 25 March 2009 Amendment.

Claims 1, 2, 3 and 17-20 are Independent.

The objection to claim 10 was withdrawn in the Notice of Panel Decision From Pre-Appeal Brief Review on 21 January 2010.

Claims 1, 3, 5-8, 10-14 and 17-20 are rejected under 35 U.S.C. §103(a) in view of Schradi et. al (U.S. Patent 5,860,918 – hereinafter “Schradi”) in view of Sakaguchi et. al (U.S. Patent 5,807,246 – hereinafter “Sakaguchi”) in view of Dia Medical System Kabushiki Kaisha (JP Laid-Open (KOKAI) 1976-787 - hereinafter “JP787”).

Claim 9 is rejected under 35 U.S.C. §103(a) in view of Schradi in view of JP787 and further in view of Manuel et. al (U.S. Patent 6,806,891 – hereinafter “Manual”), the rejected claims being the subject of this Appeal.

(iv) STATUS OF AMENDMENTS.

No Amendments have been filed subsequent to the 25 March 2009 Amendment and Response. All amendments have been entered by the Examiner.

(v) SUMMARY OF CLAIMED SUBJECT MATTER.

Pending independent Claim 1, recited in the Claims Appendix which is appended hereto, is directed to a biological information trend display device (pg. 2, lines 5-8) for displaying a time series trend of biological information (pg. 2, lines 10-19), comprising:

means for obtaining a plurality of biological information (Figs. 2-3, pg. 2, lines 12-13, pg. 16, line 10 – pg. 17, line 15, pg. 17, lines 21-26);

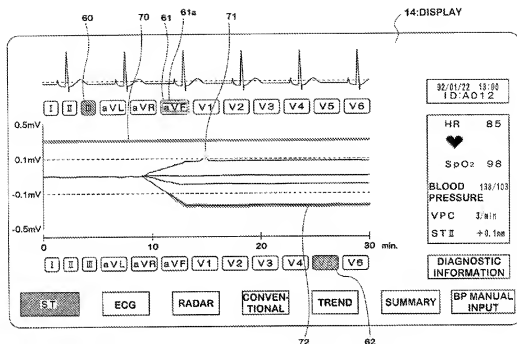
means for determining whether the obtained biological information is abnormal biological information or not (Fig. 2, pg. 2, lines 13-14, pg. 17, lines 26-30);
and

means for displaying a time-series trend for each of the plurality of biological information (Fig. 2, pg. 2, lines 14-18, pg. 17, line 31- pg. 18, line 2), wherein the displaying means changes trend display style for biological information that is determined as the abnormal biological information (Figs. 5, 8A-8C, 10, pg. 2, lines

20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20) , and wherein the displaying means further displays biological information determined as the abnormal biological information in association with information relating to the source of the biological information (Figs. 1B, 5, 8A, pg. 2, lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20) wherein a graph displaying area and a data type displaying area are provided (Figs. 1B, 5, pg. 18, lines 15-23);

the time-series trends for the plurality of biological information are overlapped and displayed on the same graph displaying area and the biological information determined as the abnormal biological information is displayed in association with information related to the source of the biological information (pg. 18, lines 21-23, Figs. 1B, 5, 8A, pg. 2, lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20); and

text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information (Figs. 1B, 5, 8A, pg. 6, lines 24-28, pg. 8, lines 22-28, pg. 19, lines 15-21, pg. 32, lines 26 – pg. 33, line 8, pgs. 18-22 – See also below highlighted version of Fig. 5).



(Color highlighted in accordance with an exemplary embodiment described on pgs. 19-22)

One embodiment, which is the subject of independent claim 2, is directed toward a computer readable medium having stored thereon the computer program for a biological information trend display device that displays a time-series trend of biological information, wherein the program is implemented in a computer and capable of causing the computer to perform: (pg. 40, line 26 – pg. 41, lines 8)

means for obtaining a plurality of biological information; (Figs. 2-3, pg. 2, lines 12-13, pg. 16, line 10 – pg. 17, line 15, pg. 17, lines 21-26)

means for determining whether the obtained biological information is abnormal biological information or not; (Fig. 2, pg. 2, lines 13-14, pg. 17, lines 26-30)

means for displaying a time-series trend for each of the plurality of biological information, (Fig. 2, pg. 2, lines 14-18, pg. 17, line 31 – pg. 18, line 2) wherein the displaying means changes trend display style for biological information that is determined as the abnormal biological information; and (Figs. 5, 8A-8C, 10, pg. 2, lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20)

wherein the displaying means further displays biological information determined as the abnormal biological information in association with information relating to the source of the biological information, (Figs. 1B, 5, 8A, pg. 2, lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20)

wherein a graph displaying area and a data type displaying area are provided; (Figs. 1B, 5, pg. 18, lines 15-23)

wherein the time-series trends for the plurality of biological information are displayed on the same graph displaying area and the biological information determined as the abnormal biological information is displayed in association with information relating to the source of the biological information; and (pg. 18, lines 23-25, Figs. 1B, 5, 8A, pg. 2, lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20)

text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information. (Figs. 1B, 5, 8A, pg. 6, lines 24-28, pg. 8, lines 22-28, pg. 19, lines 15-21, pg. 32, lines 26 – pg. 33, line 8, pgs. 18-22 – See also included highlighted version of Fig. 5)

One embodiment, which is the subject of independent claim 3, is directed toward a biological information trend display device (Pg. 2, lines 5-8) for displaying a time-series trend of biological information, comprising: (pg. 2, lines 10-19)

means for obtaining a plurality of biological information and information regarding whether the biological information is abnormal biological information or not; (Figs. 2-3, pg. 2, lines 12-13, pg. 16, line 10 – pg. 17, line 15, pg. 17, lines 21-26, pg. 2, lines 13-14, pg. 17, lines 26-30)

means for displaying a time-series trend for each of the plurality of biological information, (Fig. 2, pg. 2, lines 14-18, pg. 17, line 31 – pg. 18, line 2) wherein the displaying means changes trend display style for biological information that is determined as the abnormal biological information; and (Figs. 5, 8A-8C, 10, pg. 2,

lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20)

wherein the displaying means further displays biological information determined as the abnormal biological information in association with information relating to the source of the biological information, (Figs. 1B, 5, 8A, pg. 2, lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20)

wherein a graph displaying area and a data type displaying area are provided; (Figs. 1B, 5, pg. 18, lines 15-23)

the time-series trends for the plurality of biological information are displayed on the same graph displaying area and the biological information determined as the abnormal biological information is displayed in association with information related to the source of the biological information; and (pg. 18, lines 21-23, Figs. 1B, 5, 8A, pg. 2, lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20)

text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information. (Figs. 1B, 5, 8A, pg. 6, lines 24-28, pg. 8, lines 22-28, pg. 19, lines 15-21, pg. 32, lines 26 – pg. 33, line 8, pgs. 18-22 – See also below highlighted version of Fig. 5)

One embodiment, which is the subject of dependent claim 5, is directed toward wherein the time-series trend for biological information judged as abnormal is displayed in different style from the time-series trend for biological information judged as normal while the time-series trends for biological information judged as normal are displayed in the same style with each other. (pg. 32, line 26 – pg. 33, line 8)

One embodiment, which is the subject of dependent claim 6, is directed toward wherein the determination of the abnormal biological information comprises determination whether the biological information exceeds certain level or falls below certain level; and (pg. 4, lines 9-22)

the displaying means further displays a source for obtaining biological information at an upper portion of the time-series trend when the biological information exceeds certain level, and displays a source for obtaining biological information at a lower portion of the time-series trend when the biological information falls below certain level. (pg. 4, lines 9-17)

One embodiment, which is the subject of dependent claim 7, is directed toward wherein, when subsequent biological information is no longer determined to be abnormal biological information the displaying means further displays the trend of the subsequent biological information in the original style, and maintains the indication of the information relating to the source of the biological information. (pg. 4, lines 24-30, pg. 5, lines 1-5, pg. 21, line 18 – pg. 22, line 2)

One embodiment, which is the subject of dependent claim 8, is directed toward wherein the displaying means further displays the information relating to the source for obtaining biological information and the source related information allows to discriminate the cases: for a case in which current biological information is determined as the abnormal biological information, for a case in which past and current biological information are determined as the abnormal biological information, and for a case in which past biological information is determined as the abnormal biological information while current biological information is not determined as the abnormal biological information. (pg. 5, lines 7-17, pg. 31, lines 14-30)

One embodiment, which is the subject of dependent claim 9, is directed toward wherein the device further comprises display area for displaying the information related to the source of biological information, wherein the display area includes an inner indication area and an outer indication area that surrounds the inner indication area, and

wherein the displaying means further displays at least the inner indication area in association with biological information that is determined as the abnormal

biological information when current biological information is determined as the abnormal biological information, and displays at least the outer indication area in association with the biological information determined as the abnormal biological information when the biological information is determined as abnormal biological information in the past. (Fig. 5, Figs. 10A-10C, pg. 5, lines 25 – pg. 6, line 6, pg. 20, line 10 – pg. 21, line 16)

One embodiment, which is the subject of dependent claim 10, is directed toward wherein the displaying means further displays a time-series trend of biological information with information relating to the source of the biological information. (pg. 6, lines 14-17, pg. 18, lines 21-23, Figs. 1B, 5, 8A, pg. 2, lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20)

One embodiment, which is the subject of dependent claim 11, is directed toward wherein the displaying means displays different biological information in the same trend display style, which are derived from different sources for the biological information that is not determined as the abnormal biological information. (pg. 6, lines 24-58, pg. 32, line 26 – pg. 33, line 8)

One embodiment, which is the subject of dependent claim 12, is directed toward wherein the change of trend display style comprises changing the trend display color. (pg. 7, lines 6-15, pg. 14, lines 19-28)

One embodiment, which is the subject of dependent claim 13, is directed toward wherein the displaying means further conforms the trend display color of biological information that is determined as the abnormal biological information to display color of information relating to the source of the biological information. (pg. 7, lines 17-26, Figs. 5, 8A)

One embodiment, which is the subject of dependent claim 14, is directed toward wherein the biological information comprises information that shows different

behaviors depending on the sources. (pg. 7, line 28 – pg. 8, line 3, pg. 37, line 28 – pg. 38, line 4)

One embodiment, which is the subject of dependent claim 15, is directed toward wherein the biological information comprises information related to ST level of an electrocardiogram, and the source-related information comprises information relating to electrocardiogram lead. (pg. 8, lines 5 – 13, pg. 12, lines 11-21, pg. 13, line 7 – pg. 15, line 24)

One embodiment, which is the subject of independent claim 17, is directed toward a data display device for obtaining different types of data in a time-series and displaying each of the obtained data in a graph form, wherein the data display device sets a data type displaying area and a graph displaying area for indicating data type, and executes the procedures of: (pg. 8, line 30 – pg. 9, line 13, pg. 11, lines 9-15, pg. 38, line 27 – pg. 39, line 10)

determining whether content represented based on the obtained data is matter to be informed or not; (pg. 8, line 30 – pg. 9, line 13, pg. 11, lines 9-15, pg. 38, line 27 – pg. 39, line 10, Fig. 2, pg. 2, lines 13-14, pg. 17, lines 26-30)

displaying the data determined as the matter to be informed in a graph form by using different graph display style from that of data not determined as the matter to be informed; and (Figs. 5, 8A-8C, 10, pg. 2, lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20)

conforming all or a part of display style for indicating the data type to all or a part of the graph display style of the data; (pg. 8, line 30 – pg. 9, line 13)

wherein the time-series graphs are displayed on the same graph displaying area; and (Figs. 1B, 5, pg. 18, lines 15-23)

text indicating the source of the data is displayed in the data type displaying area in the same displaying style as the time-series trend for data which is determined to be informed. (Figs. 1B, 5, 8A, pg. 6, lines 24-28, pg. 8, lines 22-28, pg. 19, lines 15-21, pg. 32, lines 26 – pg. 33, line 8, pgs. 18-22 – See also highlighted version of Fig. 5)

One embodiment, which is the subject of independent claim 18, is directed toward a biological information trend display device for displaying a time-series trend of biological information, having a central processing unit (CPU), (Pg. 2, lines 5-8, pg. 2, lines 10-19)

said central processing unit (CPU) of the biological information trend display device executes the procedures of: (Fig. 3, pg. 16, lines 10 – pg. 17, line 9 – pg. 18, line 2)

obtaining a plurality of biological information; (Figs. 2-3, pg. 2, lines 12-13, pg. 16, line 10 – pg. 17, line 15, pg. 17, lines 21-26)

determining whether the obtained biological information is abnormal biological information or not; and (Fig. 2, pg. 2, lines 13-14, pg. 17, lines 26-30)

instructing to display a time-series trend for each of the plurality of biological information and to change trend display style for biological information that is determined as the abnormal biological information; (Figs. 5, 8A-8C, 10, pg. 2, lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20)

wherein the time-series trends for plurality of biological information are displayed on the same graph displaying area; and (Figs. 1B, 5, pg. 18, lines 15-23, pg. 18, lines 21-23, Figs. 1B, 5, 8A, pg. 2, lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20)

wherein text indicating the source of the biological information is displayed in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information. (Figs. 1B, 5, 8A, pg. 6, lines 24-28, pg. 8, lines 22-28, pg. 19, lines 15-21, pg. 32, lines 26 – pg. 33, line 8, pgs. 18-22 – See also highlighted version of Fig. 5).

One embodiment, which is the subject of independent claim 19, is directed toward a biological information trend display device for displaying a time-series trend of biological information, having a central processing unit (CPU), (Pg. 2, lines 5-8, pg. 2, lines 10-19)

said central processing unit (CPU) of the biological information trend display device executes the procedures of: (Fig. 3, pg. 16, lines 10 – pg. 17, line 9 – pg. 18, line 2)

obtaining a plurality of biological information and information regarding whether the biological information is abnormal biological information or not; and (Figs. 2-3, pg. 2, lines 12-13, pg. 16, line 10 – pg. 17, line 15, pg. 17, lines 21-26, pg. 2, lines 13-14, pg. 17, lines 26-30)

instructing to display a time-series trend for each of the plurality of biological information and to change trend display style for biological information that is determined as the abnormal biological information, (Figs. 5, 8A-8C, 10, pg. 2, lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20)

wherein a graph displaying area and a data type displaying area are provided; (Fig. 5, pg. 8, line 30 – pg. 9, line 9, pg. 18, lines 15-23)

wherein the time-series trends for plurality of biological information are displayed on the same graph displaying area and the biological information determined as the abnormal biological information is displayed in association with information relating to the source of the biological information; and (pg. 18, lines 21-23, Figs. 1B, 5, 8A, pg. 2, lines 20-25, pg. 3, lines 6-1, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20)

text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information. (Figs. 1B, 5, 8A, pg. 6, lines 24-28, pg. 8, lines 22-28, pg. 19, lines 15-21, pg. 32, lines 26 – pg. 33, line 8, pgs. 18-22 – See also below highlighted version of Fig. 5).

One embodiment, which is the subject of independent claim 20, is directed toward a data display device for obtaining different types of data in a time-series as indicator and displaying each of the obtained data in a graph form, wherein the data display device sets a data type displaying area for indicating data type and graph

displaying area, and a central processing unit (CPU) of the data display device executes the procedures of:

determining whether content represented based on obtained data is matter to be informed or not; (pg. 8, line 30 – pg. 9, line 13, pg. 11, lines 9-15, pg. 38, line 27 – pg. 39, line 10, Fig. 2, pg. 2, lines 13-14, pg. 17, lines 26-30)

instructing to display the data that is determined as the matter to be informed in a graph form by using different graph display style from that of data that is not determined as the matter to be informed; and (Figs. 5, 8A-8C, 10, pg. 2, lines 20-25, pg. 3, lines 6-10, pg. 7, lines 10-15, pg. 8, lines 1-3, lines 22-28, pg. 9, lines 24-31, pg. 10, lines 1-9, pg. 14, lines 19-22, pg. 22, lines 1-9, pg. 27, line 29 – pg. 28, line 4, pg. 32, lines 1-11, pg. 34, lines 7-11, pg. 34, lines 22-29, pg. 35, lines 24-28, pg. 37, lines 16-20)

instructing to conform all or a part of display style for indicating the data type to all or a part of the graph display style of the data; (pg. 8, line 30 – pg. 9, line 13)

wherein the time-series graphs are displayed on the same graph displaying area; and (Figs. 1B, 5, pg. 18, lines 15-23)

text indicating the source of the data is displayed on the data type displaying area in the same displaying style as the time-series trend for data which is determined to be informed. (Figs. 1B, 5, 8A, pg. 6, lines 24-28, pg. 8, lines 22-28, pg. 19, lines 15-21, pg. 32, lines 26 – pg. 33, line 8, pgs. 18-22 – See also highlighted version of Fig. 5)

While the above references to the specification and figures provide examples of where the claimed features are supported, these references are non-limiting and one or more other portions of the specification and/or figures may also support the claimed features.

(vi) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL.

1. *Whether claims 1, 3, 5-8, 10-14 and 17-20 are properly rejected under 35 U.S.C. §103(a) in view of Schradi et. al (U.S. Patent 5,860,918 – hereinafter “Schradi”) in view of Sakaguchi et. al (U.S. Patent 5,807,246 – hereinafter “Sakaguchi”) in view of Dia Medical System Kabushiki Kaisha (JP Laid-Open (KOKAI) 1976-787 - hereinafter “JP787”).*

2. *Whether claim 9 is properly rejected under 35 U.S.C. §103(a) in view of Schradi in view of JP787 and further in view of Manuel et. al (U.S. Patent 6,806,891 – hereinafter “Manual”), all of which are the subject of this Appeal.*

(vii) ARGUMENTS.

1. *Whether claims 1, 3, 5-8, 10-14 and 17-20 are properly rejected under 35 U.S.C. §103(a) in view of Schradi in view of Sakaguchi in view of JP787.*

1.1. Claim 1

Claim 1 recites, inter alia, means for displaying a time-series trend for each of the plurality of biological information, wherein the displaying means changes trend display style for biological information that is determined as the abnormal biological information, and wherein the displaying means further displays biological information determined as the abnormal biological information in association with information relating to the source of the biological information,

wherein a graph displaying area and a data type displaying area are provided;

the time-series trends for the plurality of biological information are overlapped and displayed on the same graph displaying area and the biological information determined as the abnormal biological information is displayed in association with information related to the source of the biological information; and

text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information.

In contrast, Schradi is generally directed toward a medical monitoring device that includes a system for monitoring and recording physiological parameters of a patient. The monitored physiological parameters are compared by a comparator with a predetermined threshold or an alarm limit associated with the respective physiological parameter, the presence of an event being detected, if a physiological parameter exceeds the associated threshold or the associated alarm limit for a predetermined period of time, depending on an operation mode set by a user. If the presence of an event is detected, the fact that an event was detected, the parameter value which caused the event and, optionally, further recorded parameter values as well as the respective time at which the event was detected are stored in a memory. Finally, the medical monitoring device includes a display on which a representation of the events which were stored during a predetermined, preceding period of time is

produced in relation to time. The mode of representation of a respective event depends on the extent to which the parameter causing the event has exceeded the associated threshold or the associated alarm limit. Alternatively or additionally, the representation also contains a display showing the respective thresholds during said predetermined period of time, in relation to time. (See Abstract)

The Office Action states that the features of claim 1 are disclosed on column 9, lines 15 to 32 of Schradi.

Appellants' respectfully disagree.

The Office Action further asserts that Schradi shows information determined as abnormal displayed in association with information related to the source of information on column 10, lines 26-27.

For the Boards convenience, lines 26-27 of Schradi state:

An alarm limit is the value at which a medical monitoring device triggers an optical and/or acoustical alarm so as to inform a user of the fact that an abnormal or dangerous condition of a patient exists.

The Office Action asserts that Schradi suggests in Fig. 3 that the displaying means "displays a source for abnormal biological information but does not display the source of information that is not abnormal," with further reference to column 9, lines 15-32. This portion of Schradi states:

According to the representation of FIG. 3A, the cursor 220 is arranged above a combined event, as shown at 310. If a combined event is selected, the information concerning the trigger event is always shown in inverse video in the event string box 312. The information concerning the follow-up event is shown in normal video, cf. 314.

In FIG. 3B, the case is shown where old events that occurred within the last 24 hours have to be overwritten due to storage limitation, the time range from "minus 24 hours" to the time of the overwritten event being totally blanked, cf. the block outlined by a dashed line and designated by reference numeral 350. A display of the type "Memory Overflow--old events are overwritten" can then appear in the lower area of the review window so as to make known to the user that the oldest stored events are overwritten because of insufficient storage capacities. In the example shown in FIG. 3B, the capacity amounts e.g. to 15 stored events.

Figs. 3A and 3B of Schradi illustrate:

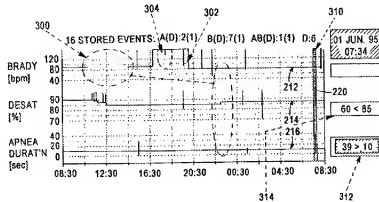
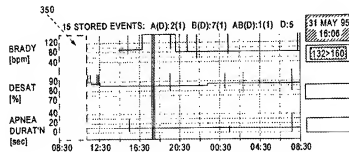


FIG.3A



Memory Overflow - old events are overwritten

FIG.3B

No reasonable interpretation of either of these portions of Schradi teaches, suggests nor discloses the *information determined as abnormal being displayed in association with information related to the source of the information.*

While the above portions of Schradi and Figs 3A-3B mention and illustrate that “memory overflow” is displayed to indicate the oldest stored events being overwritten, Appellants can again find no disclosure which teaches, suggests nor discloses that the displaying means displays a source for abnormal biological information as claimed.

As also argued during prosecution, none of the relied upon references teach, suggest nor disclose that the time-series trends for the plurality of biological information are overlapped and displayed on the same graph displaying area as recited, for example, in independent claim 1. The Office Actions have failed to provide a reference that teaches this feature.

Claim 1 also states that: text indicating the source of the biological information is displayed on the data type displaying area in the *same displaying style as the time-series trend for biological information which is determined as the abnormal biological information.*

The references are also absent any teaching that correlates the style of the text indicating the source of the biological information and the time series trend as claimed.

The Office Action concedes that “Schradi et al. does not explicitly show that the trend display style is changed for biological information that is determined as abnormal.” The Office Action however asserts that:

Sakaguchi et al. shows a display device. Sakaguchi et al. shows the display device has a CPU (processor) that executes the algorithm of figure 4. Sakaguchi et al. shows that the display style changes for biological information determined as abnormal, the change in style is color and abnormal and normal have different styles. (col. 3, line 15-17). In addition, Sakaguchi et al. shows that all normal data has the same style, i.e. not flashing (col. 3, line 15-17). Sakaguchi et al. suggests data can be displayed on a multicolor LCD display can be made more complex by increasing the color intensity, or changing the flashing cycles, so that when the degree of deviation from normal range is large, this can be distinguished by changing the flashing cycles so that flashing occurs in shorter cycles, reading on different display styles distinguishing normal from abnormal (col. 3, line 42-46). Sakaguchi et al. et al. shows the advantage of changing display styles is that it reduces ambiguity and makes it easier to read (col. 3, line 29 and col. 4, line 14-15).

Again, claim 1 recites in relevant part:

means for displaying a time-series trend for each of the plurality of biological information, wherein the displaying means changes trend display style for biological information that is determined as the abnormal biological information, and wherein the displaying means further displays biological information determined as the abnormal biological information in association with information relating to the source of the biological information,

wherein a graph displaying area and a data type displaying area are provided;

the time-series trends for the plurality of biological information are overlapped and displayed on the same graph displaying area and the biological information

determined as the abnormal biological information is displayed in association with information related to the source of the biological information; and

text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information.

These features are not taught by Sakaguchi which merely addresses:

By means of the aforesaid operations, display of various types of medical diagnosis and treatment data in 3 types of modes is possible, so that when normal data is displayed by steady green illumination, when abnormal data is displayed by read flashing, and measurement values when settings are changed is displayed as continuous red illumination, it is easy to distinguish by the display mode the type of data which is being displayed, and to read the numerical values displayed at this time. Specifically, no longer are the modes in which different types of data or status displayed the same, and not only is the verification of the display facilitated, but the possibility of misreading can be eliminated.

A teaching of simply changing the display for abnormal information does not anticipate nor render obvious the claimed features.

The Office Action continues by asserting that:

Schradi et al., and in view of Sakaguchi et al. do not show a plurality of biological information that is overlapped or embodiments where subsequent biological information that is determined not abnormal is displayed in the original style and the previous abnormal biological information is maintained.

JP787 shows a trend display device for biological information. Figure 2 shows that the plurality of biological information is overlapped. JP787 shows the device has information obtaining means, an abnormal information determination means, and a display means (p. 1). JP787 shows that the display mean displays information determined to be abnormal and identifies its source (p. 6, para. 2). JP787 shows the determination of an abnormal event causes the display to present the information (p. 6, para. 2). JP787 shows the trend style change corresponds to a change in color of the trend information (p. 5-6). JP787 shows that each source of information is coded by color (p. 5). JP787 shows the color coded source undergoes a color change when the source exceeds or drops below a threshold (p. 5 and exemplified on p. 6). JP787 shows that subsequent and current biological information are displayed reading on subsequent biological information that is determined not abnormal is displayed in the original style and the previous abnormal biological information is maintained, in which the styles of normal information and abnormal information are different (p. 5-6 and figure 2). JP787 shows that the display means allows discriminating between cases where current information is abnormal;

past and current information are abnormal and past information is abnormal but current information is not abnormal (p.7-8). JP787 shows that changing the display style to indicate the source of the abnormal information has the advantages of focusing attention on the abnormal data and leads to the administration of immediate, proper treatment (p. 3 and p. 8).

It would have been obvious to one of ordinary skill at the time of invention to modify the display device of Schradi et al. with the display formatting of Sakaguchi et al. because Sakaguchi et al. shows the advantage of changing display styles is that it reduces ambiguity and makes it easier to read. It would have been further obvious to one of ordinary skill at the time of invention to modify the display device of Schradi et al., and in view of Sakaguchi et al. with the previous abnormal biological information and subsequent normal biological information and discrimination of cases of JP787 because JP787 shows that indicating the source of the abnormal information by changing display styles has the advantages of focusing attention on the abnormal data and leads to the administration of immediate, proper treatment.

JP787 is directed toward a trends display device for biological information where the biological curve showing biological information determined as abnormal is displayed in a different color from the color used for normal biological information. In JP787, each of the curves showing biological information is distinguished by the color of the curve.

However, in JP787, there is no teaching, suggestion or disclosure of “the data type displaying area being provided in addition to the graph display area and the text as a source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information.”

One exemplary advantage the present invention has over JP787, is that in JP787 it is difficult to judge which biological information is abnormal because *only* the color of the graph is used for distinguishing biological information.

In contrast, the features of Claim 1 allow for easy judgment as to which biological information is abnormal because the source of the abnormal biological information is displayed by text and it is displayed in the same color, etc., or style as the graph corresponding to the abnormal biological information.

In that the Schradi reference, whether taken alone or in combination with the other relied upon references, fails to teach, suggest, or disclose the combination of

features as recited in independent claim 1, claim 1 is clearly patentably distinguishable therefrom.

The legal thresholds for upholding an obviousness rejection have not been met.

The Board is thus respectfully requested to overturn the rejection.

1.2. Claim 2

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

In that independent claim 2 is directed toward comparable features of claim 1, the above arguments are equally applicable to independent claim 2.

The Board is thus respectfully requested to overturn the rejection.

1.3. Claim 3

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

In that independent claim 3 is directed toward comparable features of claim 1, the above arguments are equally applicable to independent claim 3.

The Board is thus respectfully requested to overturn the rejection.

1.4. Claim 5

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, dependent claim 5 recites:

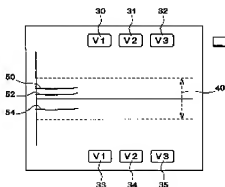
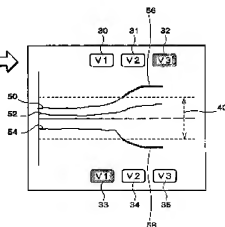
wherein the time-series trend for biological information judged as abnormal is displayed in different style from the time-series trend for biological information judged as normal while the time-series trends for biological information judged as normal are displayed in the same style with each other.

By virtue of claim 5's dependency from claim 1, and in that the references at least fail to teach, suggest or disclose the time-series trends for the plurality of biological information are overlapped and displayed on the same graph displaying

area and the biological information determined as the abnormal biological information is displayed in association with information related to the source of the biological information, and text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information, the references cannot teach, suggest or disclose the features recited in dependent claim 5.

Even more specifically, claim 5 is exemplified by the time-series trend for biological information judged as abnormal being displayed in a different style from the time-series trend for biological information judged as normal, while the time-series trends for biological information judged as normal are displayed in the same style with each other.

This feature is at least illustrated in accordance with an exemplary embodiment shown in Fig. 1A and Fig. 1B of the present application. Here, the curve segments 56 and 58 are displayed in different style from the time-series trends 50, 52 and 54 for biological information judged as normal.

FIG.1A**FIG.1B**

The above feature is not disclosed in Schrudi nor JP787.

In that the references at least fail to teach, suggest or disclose each and every claimed feature, the references cannot render obvious claim 5.

The Board is thus respectfully requested to overturn the rejection.

1.5. Claim 6

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, dependent claim 6 recites:

wherein the determination of the abnormal biological information comprises determination whether the biological information exceeds certain level or falls below certain level; and

the displaying means further displays a source for obtaining biological information at an upper portion of the time-series trend when the biological information exceeds certain level, and displays a source for obtaining biological information at a lower portion of the time-series trend when the biological information falls below certain level.

In that the Office has failed to provide any reference that teaches, suggests or discloses the above feature, Appellants respectfully assume that the claim must therefore contain allowable subject matter.

In that the references at least fail to teach, suggest or disclose each and every claimed feature, the references cannot render obvious claim 6.

The Board is thus respectfully requested to overturn the rejection.

1.6. Claim 7

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, dependent claim 7 recites:

when subsequent biological information is no longer determined to be abnormal biological information the displaying means further displays the trend of the subsequent biological information in the original style, and maintains the indication of the information relating to the source of the biological information.

In that the Office has failed to provide any reference that teaches, suggests or discloses the above feature, Appellants respectfully assume that the claim must therefore contain allowable subject matter.

In that the references at least fail to teach, suggest or disclose each and every claimed feature, the references cannot render obvious claim 7.

The Board is thus respectfully requested to overturn the rejection.

1.7. Claim 8

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, dependent claim 8 recites:

wherein the displaying means further displays the information relating to the source for obtaining biological information and the source related information allows to discriminate the cases: for a case in which current biological information is determined as the abnormal biological information, for a case in which past and current biological information are determined as the abnormal biological information, and for a case in which past biological information is determined as the abnormal biological information while current biological information is not determined as the abnormal biological information.

In that the Office has failed to provide any reference that teaches, suggests or discloses the ability to discriminate the cases recited above, Appellants respectfully assume that the claim must therefore contain allowable subject matter.

In that the references at least fail to teach, suggest or disclose each and every claimed feature, the references cannot render obvious claim 8.

The Board is thus respectfully requested to overturn the rejection.

1.8. Claim 10

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, dependent claim 10 recites:

wherein the displaying means further displays a time-series trend of biological information with information relating to the source of the biological information.

In that the Office has failed to provide any reference that teaches, suggests or discloses the ability to display the time-series trend as recited above, Appellants respectfully assume that the claim must therefore contain allowable subject matter.

In that the references at least fail to teach, suggest or disclose each and every claimed feature, the references cannot render obvious claim 10.

The Board is thus respectfully requested to overturn the rejection.

1.9. Claim 11

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, dependent claim 11 recites:

wherein the displaying means displays different biological information in the same trend display style, which are derived from different sources for the biological information that is not determined as the abnormal biological information.

In that the Office has failed to provide any reference that teaches, suggests or discloses the ability to display the different biological information as recited above, Appellants respectfully assume that the claim must therefore contain allowable subject matter.

In that the references at least fail to teach, suggest or disclose each and every claimed feature, the references cannot render obvious claim 11.

The Board is thus respectfully requested to overturn the rejection.

1.10. Claim 12

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, dependent claim 12 recites:

wherein the change of trend display style comprises changing the trend display color.

In that the Office has failed to provide any reference that teaches, suggests or discloses the ability to change color in the manner as recited above, Appellants respectfully assume that the claim must therefore contain allowable subject matter. For example, none of the relied upon references teach, suggest nor disclose the ability to change the color of text indicating the source of the biological information in conjunction with the time-series trend for biological information which is determined as the abnormal biological information.

In that the references at least fail to teach, suggest or disclose each and every claimed feature, the references cannot render obvious claim 12.

The Board is thus respectfully requested to overturn the rejection.

1.11. Claim 13

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, dependent claim 13 recites:

wherein the displaying means further conforms the trend display color of biological information that is determined as the abnormal biological information to display color of information relating to the source of the biological information.

In that the Office has failed to provide any reference that teaches, suggests or discloses the ability to change color in the manner as recited above, Appellants respectfully assume that the claim must therefore contain allowable subject matter. For example, none of the relied upon references teach, suggest nor disclose the ability to conform the trend display color of biological information that is determined as the abnormal biological information to display color of information relating to the source of the biological information.

In that the references at least fail to teach, suggest or disclose each and every claimed feature, the references cannot render obvious claim 13.

The Board is thus respectfully requested to overturn the rejection.

1.12. Claim 14

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, dependent claim 8 recites:

wherein the biological information comprises information that shows different behaviors depending on the sources.

In that the Office has failed to provide any reference that teaches, suggests or discloses the ability to show different behaviors as recited, Appellants respectfully assume that the claim must therefore contain allowable subject matter.

In that the references at least fail to teach, suggest or disclose each and every claimed feature, the references cannot render obvious claim 14.

The Board is thus respectfully requested to overturn the rejection.

1.13. Claim 15

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, dependent claim 15 recites:

wherein the biological information comprises information related to ST level of an electrocardiogram, and the source-related information comprises information relating to electrocardiogram lead.

In that the Office has failed to provide any reference that teaches, suggests or discloses the time-series trends and text as recited in independent claim 1, Appellants respectfully submit the references also cannot teach or suggest the above-recited feature.

In that the references at least fail to teach, suggest or disclose each and every claimed feature, the references cannot render obvious claim 15.

The Board is thus respectfully requested to overturn the rejection.

1.14. Claim 17

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, independent claim 17 recites:

A data display device for obtaining different types of data in a time-series and displaying each of the obtained data in a graph form, wherein the data display device sets a data type displaying area and a graph displaying area for indicating data type, and executes the procedures of:

determining whether content represented based on the obtained data is matter to be informed or not;

displaying the data determined as the matter to be informed in a graph form by using different graph display style from that of data not determined as the matter to be informed; and

conforming all or a part of display style for indicating the data type to all or a part of the graph display style of the data;

wherein the time-series graphs are displayed on the same graph displaying area; and

text indicating the source of the data is displayed in the data type displaying area in the same displaying style as the time-series trend for data which is determined to be informed.

Similar to Claim 1, independent claim 17 requires the displaying of the data determined as the matter to be informed in a graph form by using a different graph display style from that of data not determined as the matter to be informed, conforming all or a part of display style for indicating the data type to all or a part of the graph display style of the data... and text indicating the source of the data is displayed in the data type displaying area in the *same displaying style* as the time-series trend for data which is determined to be informed.

As discussed, Appellants can find no disclosure anywhere in the relied upon reference, which even mention text indicating the source of the data is displayed in the data type displaying area in the same displaying style as the time-series trend for data which is determined to be informed.

In that the Office has failed to provide a reference(s) that teaches, suggests or discloses the above combination of features, Appellants respectfully submit that a *prima facie* case of obviousness has not been established.

The Board is thus respectfully requested to overturn the rejection.

1.15. Claim 18

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, independent claim 18 recites:

... central processing unit (CPU) of the biological information trend display device executes the procedures of:

obtaining a plurality of biological information;

determining whether the obtained biological information is abnormal biological information or not; and

instructing to display a time-series trend for each of the plurality of biological information and to change trend display style for biological information that is determined as the abnormal biological information;

wherein the time-series trends for plurality of biological information are displayed on the same graph displaying area; and

wherein text indicating the source of the biological information is displayed in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information.

Similar to Claim 1, independent claim 18 requires instructing to display a time-series trend for each of the plurality of biological information and to *change trend display style for biological information that is determined as the abnormal biological information*...wherein text indicating the source of the biological information is displayed in the I as the time-series trend for biological information which is determined as the abnormal biological information.

As discussed, Appellants respectfully submit that no relied upon reference even mentions text indicating the source of the biological information is displayed in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information as claimed.

Appellants thus respectfully submit that a *prima facie* case of obviousness has not been established.

The Board is thus respectfully requested to overturn the rejection.

1.16. Claim 19

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, independent claim 19 recites:

... said central processing unit (CPU) of the biological information trend display device executes the procedures of:

obtaining a plurality of biological information and information regarding whether the biological information is abnormal biological information or not; and

instructing to display a time-series trend for each of the plurality of biological information and to change trend display style for biological information that is determined as the abnormal biological information,

wherein a graph displaying area and a data type displaying area are provided;

wherein the time-series trends for plurality of biological information are displayed on the same graph displaying area and the biological information

determined as the abnormal biological information is displayed in association with information relating to the source of the biological information; and

text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information.

Similar to Claim 1, independent claim 19 requires the display of a time-series trend for each of the plurality of biological information and to change trend display style for biological information that is determined as the abnormal biological information...wherein the time-series trends for plurality of biological information are displayed on the same graph displaying area and the biological information determined as the abnormal biological information is displayed in association with information relating to the source of the biological information and text indicating the source of the biological information is displayed on the data type displaying area in the *same displaying style* as the time-series trend for biological information which is determined as the abnormal biological information.

As discussed, the Office has at least failed to provide any disclosure relating to text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information.

In that the Office has failed to provide a reference that teaches, suggests or discloses the above combination of features, Appellants respectfully submit that a *prima facie* case of obviousness has not been established.

The Board is thus respectfully requested to overturn the rejection.

1.17. Claim 20

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

More specifically, independent claim 20 recites:

...determining whether content represented based on obtained data is matter to be informed or not, instructing to display the data that is determined as the matter to be informed in a graph form by using different graph display style from that of data that is not determined as the matter to be informed and instructing to conform all or a part of display style for indicating the data type to all or a part of the graph display

style of the data... text indicating the source of the data is displayed on the data type displaying area in the same displaying style as the time-series trend for data which is determined to be informed.

Similar to Claim 1, independent claim 17 requires using a different graph display style from that of data that is not determined as the matter to be informed and instructing to conform all or a part of display style for indicating the data type to all or a part of the graph display style of the data... text indicating the source of the data is displayed on the data type displaying area in the *same displaying style* as the time-series trend for data which is determined to be informed.

The references, whether taken alone or in combination, are simply devoid of the above teaching.

In that the Office has at least failed to provide a reference(s) that teaches, suggests or discloses the above combination of features, Appellants respectfully submit that a *prima facie* case of obviousness has not been established.

The Board is thus respectfully requested to overturn the rejection.

2. *Whether claim 9 is properly rejected under 35 U.S.C. §103(a) in view of Schradi in view of JP787 and further in view of Manuel.*

2.1. *Claim 9*

Appellants hereby incorporate the above arguments in support of the Appeal of the current rejection and reiterate that the cited references, taken either alone or in combination, fail to teach, suggest or disclose the claimed features.

Dependent Claim 9 recites:

wherein the device further comprises display area for displaying the information related to the source of biological information, wherein the display area includes an inner indication area and an outer indication area that surrounds the inner indication area, and

wherein the displaying means further displays at least the inner indication area in association with biological information that is determined as the abnormal biological information when current biological information is determined as the abnormal biological information, and displays at least the outer indication area in association with the biological information determined as the abnormal biological information when the biological information is determined as abnormal biological information in the past.

Dependent claim 9 depends from claim 8 which itself depends from claim 1. As discussed, claim 1 recites, inter alia, the time-series trends for the plurality of biological information are overlapped and displayed on the same graph displaying area and the biological information determined as the abnormal biological information is displayed in association with information related to the source of the biological information and text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information. Claim 9 then requires that the displaying means further displays at least the inner indication area in association with biological information that is determined as the abnormal biological information when current biological information is determined as the abnormal biological information, and displays at least the outer indication area in association with the biological information determined as the abnormal biological information when the biological information is determined as abnormal biological information in the past.

First, Manuel has nothing to do with biological information. In sharp contrast, Manuel is directed toward a method and system for graphically displaying status information concerning the allocation of a process resource to a process entity. More particularly, the present invention provides a method and system for displaying the booking status between process entities and process resources in a control processing system. In order to display booking status between processing entities and process resources, the present invention identifies a process resource and multiple process entities (each of each can operate with the process resource), and displays a status indicator responsive to the status of booking requests of identified process entities for the identified process resource.

Second, Manuel has no teaching that can be correlated to the claimed abnormal biological information.

Third, Manuel has no teaching, suggestion or disclosure of displaying at least the outer indication area in association with the biological information determined as the abnormal biological information when the biological information is determined as abnormal biological information in the past. (See for example Appellants Figs. 10A – 10C)

Again in contrast, Manuel does not correlate the text to the time series trend information nor correlate an outer indication with the biological information determined as the abnormal biological information.

At least based on the above, it is abundantly clear that the references, taken either alone or in combination, fail to teach, suggest or disclose each and every aspect of Claim 9. Moreover, the asserted motivation to combine the references is neither technically possible, based in fact nor law, nor has any relevance to the claimed subject matter.

The Board is thus respectfully requested to overturn the rejection.

Conclusion


Since the cited references, whether taken alone or in combination, fail to teach or suggest each and every claimed feature, a *prima facie* case of obviousness has not been established.

The Board is respectfully requested to overturn the above rejections - Remand to the Examiner with an indication of allowable subject matter is earnestly solicited.

The Commissioner is hereby authorized to charge to deposit account number 19-1970 any fees under 37 CFR § 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has not been separately requested, such extension is hereby petitioned.

Respectfully submitted,

Date: 19 May 2010

By: 
Jason H. Vick
Reg. No. 45,285
1560 Broadway, Suite 1200
Denver, Colorado 80202
Telephone: 303-863-9700

(viii) CLAIMS APPENDIX.

1. A biological information trend display device for displaying a time series trend of biological information, comprising:
 - means for obtaining a plurality of biological information;
 - means for determining whether the obtained biological information is abnormal biological information or not; and
 - means for displaying a time-series trend for each of the plurality of biological information, wherein the displaying means changes trend display style for biological information that is determined as the abnormal biological information, and wherein the displaying means further displays biological information determined as the abnormal biological information in association with information relating to the source of the biological information,
 - wherein a graph displaying area and a data type displaying area are provided;
 - the time-series trends for the plurality of biological information are overlapped and displayed on the same graph displaying area and the biological information determined as the abnormal biological information is displayed in association with information related to the source of the biological information; and
 - text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information.
2. A computer readable medium having stored thereon the computer program for a biological information trend display device that displays a time-series trend of biological information, wherein the program is implemented in a computer and capable of causing the computer to perform:
 - means for obtaining a plurality of biological information;
 - means for determining whether the obtained biological information is abnormal biological information or not;
 - means for displaying a time-series trend for each of the plurality of biological information, wherein the displaying means changes trend display style for biological information that is determined as the abnormal biological information; and
 - wherein the displaying means further displays biological information determined as the abnormal biological information in association with information relating to the source of the biological information,

wherein a graph displaying area and a data type displaying area are provided;
wherein the time-series trends for the plurality of biological information are displayed on the same graph displaying area and the biological information determined as the abnormal biological information is displayed in association with information relating to the source of the biological information; and

text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information.

3. A biological information trend display device for displaying a time-series trend of biological information, comprising:

means for obtaining a plurality of biological information and information regarding whether the biological information is abnormal biological information or not;

means for displaying a time-series trend for each of the plurality of biological information, wherein the displaying means changes trend display style for biological information that is determined as the abnormal biological information; and

wherein the displaying means further displays biological information determined as the abnormal biological information in association with information relating to the source of the biological information,

wherein a graph displaying area and a data type displaying area are provided;
the time-series trends for the plurality of biological information are displayed on the same graph displaying area and the biological information determined as the abnormal biological information is displayed in association with information related to the source of the biological information; and

text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information.

4. (Canceled)

5. The device according to claim 1, wherein the time-series trend for biological information judged as abnormal is displayed in different style from the time-series trend for biological information judged as normal while the time-series trends for biological information judged as normal are displayed in the same style with each other.

6. The device according to claim 1, wherein the determination of the abnormal biological information comprises determination whether the biological information exceeds certain level or falls below certain level; and

the displaying means further displays a source for obtaining biological information at an upper portion of the time-series trend when the biological information exceeds certain level, and displays a source for obtaining biological information at a lower portion of the time-series trend when the biological information falls below certain level.

7. The device according to claim 1, wherein, when subsequent biological information is no longer determined to be abnormal biological information the displaying means further displays the trend of the subsequent biological information in the original style, and maintains the indication of the information relating to the source of the biological information.

8. The device according to claim 1, wherein the displaying means further displays the information relating to the source for obtaining biological information and the source related information allows to discriminate the cases: for a case in which current biological information is determined as the abnormal biological information, for a case in which past and current biological information are determined as the abnormal biological information, and for a case in which past biological information is determined as the abnormal biological information while current biological information is not determined as the abnormal biological information.

9. The device according to claim 8, wherein the device further comprises display area for displaying the information related to the source of biological information, wherein the display area includes an inner indication area and an outer indication area that surrounds the inner indication area, and

wherein the displaying means further displays at least the inner indication area in association with biological information that is determined as the abnormal biological information when current biological information is determined as the abnormal biological information, and displays at least the outer indication area in association with the biological information determined as the abnormal biological information when the biological information is determined as abnormal biological information in the past.

10. The device according to claim 1, wherein the displaying means further displays a time-series trend of biological information with information relating to the source of the biological information.

11. The device according to claim 1, wherein the displaying means displays different biological information in the same trend display style, which are derived from different sources for the biological information that is not determined as the abnormal biological information.

12. The device according to claim 1, wherein the change of trend display style comprises changing the trend display color.

13. The device according to claim 12, wherein the displaying means further conforms the trend display color of biological information that is determined as the abnormal biological information to display color of information relating to the source of the biological information.

14. The device according to claim 1, wherein the biological information comprises information that shows different behaviors depending on the sources.

15. The device according to claim 14, wherein the biological information comprises information related to ST level of an electrocardiogram, and the source-related information comprises information relating to electrocardiogram lead.

16. (Canceled)

17. A data display device for obtaining different types of data in a time-series and displaying each of the obtained data in a graph form, wherein the data display device sets a data type displaying area and a graph displaying area for indicating data type, and executes the procedures of:

determining whether content represented based on the obtained data is matter to be informed or not;

displaying the data determined as the matter to be informed in a graph form by using different graph display style from that of data not determined as the matter to be informed; and

conforming all or a part of display style for indicating the data type to all or a part of the graph display style of the data;

wherein the time-series graphs are displayed on the same graph displaying area; and

text indicating the source of the data is displayed in the data type displaying area in the same displaying style as the time-series trend for data which is determined to be informed.

18. A biological information trend display device for displaying a time-series trend of biological information, having a central processing unit (CPU),
said central processing unit (CPU) of the biological information trend display device executes the procedures of:
 - obtaining a plurality of biological information;
 - determining whether the obtained biological information is abnormal biological information or not; and
 - instructing to display a time-series trend for each of the plurality of biological information and to change trend display style for biological information that is determined as the abnormal biological information;
 - wherein the time-series trends for plurality of biological information are displayed on the same graph displaying area; and
 - wherein text indicating the source of the biological information is displayed in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information.
19. A biological information trend display device for displaying a time-series trend of biological information, having a central processing unit (CPU),
said central processing unit (CPU) of the biological information trend display device executes the procedures of:
 - obtaining a plurality of biological information and information regarding whether the biological information is abnormal biological information or not; and
 - instructing to display a time-series trend for each of the plurality of biological information and to change trend display style for biological information that is determined as the abnormal biological information,
 - wherein a graph displaying area and a data type displaying area are provided;
 - wherein the time-series trends for plurality of biological information are displayed on the same graph displaying area and the biological information determined as the abnormal biological information is displayed in association with information relating to the source of the biological information; and

text indicating the source of the biological information is displayed on the data type displaying area in the same displaying style as the time-series trend for biological information which is determined as the abnormal biological information.

20. A data display device for obtaining different types of data in a time-series as indicator and displaying each of the obtained data in a graph form, wherein the data display device sets a data type displaying area for indicating data type and graph displaying area, and a central processing unit (CPU) of the data display device executes the procedures of:

determining whether content represented based on obtained data is matter to be informed or not;

instructing to display the data that is determined as the matter to be informed in a graph form by using different graph display style from that of data that is not determined as the matter to be informed; and

instructing to conform all or a part of display style for indicating the data type to all or a part of the graph display style of the data;

wherein the time-series graphs are displayed on the same graph displaying area; and

text indicating the source of the data is displayed on the data type displaying area in the same displaying style as the time-series trend for data which is determined to be informed.

21. (Cancelled)

(ix) EVIDENCE APPENDIX.

None.

(x) RELATED PROCEEDINGS APPENDIX.

None.